REMARKS

Claims 1-64 were presented for examination and were rejected. Claims 42-44 are cancelled. Claims 2, 5-8,14 and 58-61 are amended to correct various typographical errors. No claim is being amended for any reason related to patentability, except insofar as it may have been rejected by the Examiner because of a typographical error. No amendment is intended to narrow the scope of any claim.

The Examiner required a restriction under 35 U.S.C. 121 between Group I (claims 41 and 45-64) and Group II (claims 42-44). As agreed in a telephone conversation between the Examiner and Attorney Robert Sachs, Group I was elected without traverse. Claims 42-44 have therefore been withdrawn from consideration, and are hereby cancelled without prejudice.

The specification has been amended to correct occasional typographical errors. In addition, the Abstract has been amended to overcome the Examiner's length objection, and is now less than 150 words.

The Examiner issued a requirement for information under 37 C.F.R. 1.105. In response, Applicants are enclosing an HNC brochure describing HNC's Vericomp Claimant product. To the best of the Applicants' knowledge, Vericomp Claimant is the product referred to in the published document cited by the Examiner in the Requirement for Information. An Information Disclosure Statement citing the enclosed reference is also included.

The Examiner objected to claim 14 because of a typographical error: Claim 14 is amended to remove the typographical error.

The Examiner rejected claim 6 under 35 U.S.C. 112, second paragraph. Claim 6 now depends from claim 5, and thus provides antecedent basis for "the scoring period."

The Examiner rejected claims 1-11,17-41 and 49-52 under 35 USC 103(a) as being unpatentable over Gopinathan et al. (Gopinathan) in view of Fischthal and Downs. Applicants respectfully traverse these rejections.

Claim 1 recites:

> A method for detecting misrepresentation of policy related information provided to an insurer by a policyholder where the information is used by the insurer in determining an amount of premium to be paid for insurance coverage provided to the policyholder, the method comprising:
>
> selecting a plurality of insurance policies to process with a predictive model;
>
> for each selected policy, deriving variables from policy related. information provided by the policyholder in connection with the selected policy; and
>
> for each selected policy, applying the derived variables of the policy to the predictive model to generate a model score indicating the relative likelihood of misrepresented information provided by the policyholder or an expected adjustment of the premium on the policy.

In determining appropriate premiums to charge their customers, insurers rely in large part on information provided by the customers themselves. Thus, if a customer provides false or misleading information, the misrepresentation can result in a premium that is too low. The claimed invention detects such misrepresentations by using a predictive model to analyze variables derived from selected policies, and generating a score indicating the relative likelihood of misrepresentation in the policy information provided.

Gopinathan does not disclose, teach or suggest the claimed invention, either alone or in combination with the Fischthal or Downs references. Gopinathan relates generally to using a predictive model to detect fraudulent use of customer accounts and account numbers, such as in credit card transactions (col. 1, lines 12-15). Although both Gopinathan and the claimed invention disclose using a predictive model to determine a score, the two are patentably distinct. For example, in Gopinathan, credit card users are

profiled, and each transaction is scored for fraud in view of that profile. In contrast, the claimed invention does not use profiles, and indeed does not even score transactions. Instead, the claimed invention scores information submitted periodically, such as payroll reports in the case of workers' compensation. To that end, while Gopinathan teaches instantly determining a score for a discrete transaction, based on a profile and without reference to a database to derive profiles, the claimed invention derives variables from policy information typically provided some time ago, as well as claim information, and does so without any profiles by referring to a database.

Thus, Gopinathan uses profiles to score instantaneous, discrete transactions in order to assess whether the transaction being scored is fraudulent. The claimed invention uses no profiles, and derives variables from data provided by a policyholder in order to determine whether the policyholder should be audited. There is no transaction in the claimed invention, and indeed no analogy between assessing whether a credit card transaction is fraudulent, and whether an insurance policy has been obtained fraudulently. In the former case, fraud typically arises because a valid, lawfully obtained credit card is being used by a person not authorized to use it. In the latter case, using workers' compensation as an example, employer fraud arises when the employer lies about the nature of the business, the number of employees, the payroll amounts, etc., in order to reduce the premium. The Gopinathan model of using profiles to score transactions does not lend itself to solving this problem, and indeed Gopinathan does not teach, disclose or suggest the claimed invention.

The addition of Fischtal does not cure the defects of Gopinathan. Fischthal uses data-driven clustering to define groups (classes) and then trains a neural network on each of the classes from the clustering. For example, if his clustering technique creates10 classes, he builds 10 neural networks. That technique is a form of "segmentation." The claimed invention does not do any segmentation. The claimed invention uses clusters (industry-defined or data-driven) to help derive variables (e.g. distribution of payroll in this payroll report compared with its peers). A single neural network is then trained on all the data. While Fischthal handles different groups by

segmenting and building multiple neural networks, the claimed invention handles different groups more elegantly by creating variables that enable a policy to be handled correctly (no matter what group it is in) all within a single neural network. As Fischthal points out, his method works with "very large amounts of data." One drawback to segmentation (by any method) is that with ten classes, one needs enough data to build ten neural networks. Without segmenting, only enough data to build one neural network is needed, but in order to do that a way is needed to handle (within one model) the fact that the data encompasses several groups (e.g. policies from several industries – a construction firm is not the same thing as a law firm and their payroll reports would be expected to look different). Fischthal's technique is understood to have been developed while working on IRS data, and because of the very large amount of data, his technique lends itself to multiple neural networks. However, such a system does not lend itself to most fraud detection applications, including that of the claimed invention. Thus, Fischtal actually teaches away from the claimed invention, and does not, either alone or in combination with Gopinathan, teach, suggest or disclose the claimed invention.

The addition of the Downs article does not cure the defects of Gopinathan and Fischtal. The Downs article merely discloses the existence of the health care fraud problem. Morever, the article is primarily concerned with fraud in health care claims, not in the obtaining of lower premiums through misrepresentation. Thus, the Downs article does not teach, suggest or disclose claim 1.

Thus, neither Gopinathan, Fischtal nor the Downs article, alone or in combination, teach, suggest or disclose claim 1. Independent claim 49 is patentable over the cited references for reasons analogous to those above with respect to claim 1. Dependent claims 2-41, 45-48 and 50-52 depend from patentable claims 1 and 49, and derive patentability from the independent claims from which they depend, in addition to reciting their own patentable features. Thus, claims 1-41 and 45-52 are patentable over the cited references and should be allowed.

The Examiner rejected claims 53-64 under 35 U.S.C.103(a) as being unpatentable over Gopinathan in view of Fischthaf, Downs, and Hann. However, claims 53-64 are patentable over Gopinathan in combination with Fischthal and Downs for the reasons discussed above with respect to claims 1 and 49. Furthermore, the addition of Hann does not cure the defects of the remaining references. Hann discloses the existence of systems designed to detect claims fraud, such as HNC's VeriComp Claimant Fraud and Abuse Detection System (VCC). However, as is the case with Gopinathan, VCC and other systems are designed to use profiles to score transactions (including claims). The claimed invention does not use profiles, and does not score transactions, as discussed above. Therefore, claims 53-64 are patentable over the cited references and the rejection should be withdrawn.

In light of these Remarks, the Examiner is asked to issue a Notice of Allowance allowing all claims now pending, claims 1-41 and 45-64. If any issues remain outstanding prior to allowance, the Examiner is requested to contact the undersigned attorney so that they may be expeditiously resolved.

Respectfully submitted,

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